Attorney Docket No. PAYN-001

APPLICATION

FOR UNITED STATES LETTERS PATENT

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

BE IT KNOWN THAT I, **Robert D. Payne**, a citizen of the United States, have invented a new and useful molding remover system of which the following is a specification:

Molding Remover System

CROSS REFERENCE TO RELATED APPLICATIONS

Not applicable to this application.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

Not applicable to this application.

BACKGROUND OF THE INVENTION

Field of the Invention

The present invention relates generally to vehicle molding removers and more specifically it relates to a molding remover system for efficiently removing door molding from a vehicle without requiring removal of the door glass.

Description of the Related Art

Window molding for automobiles typically has clips that have a resilient jaw member. The jaw member has a lower hook that engages the lower edge of an

extended member within the door frame. Figures 4 through 9 illustrate an exemplary window molding attached within a door frame of an automobile. There is a need for an efficient system that allows for the removal of window molding without requiring removal of the door glass.

BRIEF SUMMARY OF THE INVENTION

In view of the foregoing disadvantages inherent in the known types of molding removers now present in the prior art, the present invention provides a new molding remover system construction wherein the same can be utilized for efficiently removing door molding from a vehicle.

The general purpose of the present invention, which will be described subsequently in greater detail, is to provide a new molding remover system that has many of the advantages of the molding removers mentioned heretofore and many novel features that result in a new molding remover system which is not anticipated, rendered obvious, suggested, or even implied by any of the prior art molding removers, either alone or in any combination thereof.

To attain this, the present invention generally comprises a handle and a shaft member extending from the handle. The shaft member has an engaging portion that extends toward the handle. The engaging portion is formed for engaging a retainer clip attaching a window molding to a door frame.

There has thus been outlined, rather broadly, the more important features of the invention in order that the detailed description thereof may be better understood, and in order that the present contribution to the art may be better appreciated. There are additional features of the invention that will be described hereinafter and that will form the subject matter of the claims appended hereto.

In this respect, before explaining at least one embodiment of the invention in detail, it is to be understood that the invention is not limited in its application to the details of construction and to the arrangements of the components set forth in the

following description or illustrated in the drawings. The invention is capable of other embodiments and of being practiced and carried out in various ways. Also, it is to be understood that the phraseology and terminology employed herein are for the purpose of the description and should not be regarded as limiting.

A primary object of the present invention is to provide a molding remover system that will overcome the shortcomings of the prior art devices.

A second object is to provide a molding remover system for efficiently removing door molding from a vehicle without requiring removal of the door glass.

Another object is to provide a molding remover system that does not damage the molding or clip structure.

An additional object is to provide a molding remover system that can be utilized upon various models of automobiles.

Other objects and advantages of the present invention will become obvious to the reader and it is intended that these objects and advantages are within the scope of the present invention.

To the accomplishment of the above and related objects, this invention may be embodied in the form illustrated in the accompanying drawings, attention being called to the fact, however, that the drawings are illustrative only, and that changes may be made in the specific construction illustrated and described within the scope of the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

Various other objects, features and attendant advantages of the present invention will become fully appreciated as the same becomes better understood when considered in conjunction with the accompanying drawings, in which like reference characters designate the same or similar parts throughout the several views, and wherein:

FIG. 1 is an upper perspective view of the present invention in a first position.

FIG. 2 is an upper perspective view of the present invention in a second position.

FIG. 3 is an upper perspective view of the present invention in a third position.

FIG. 4 is an end view of the present invention.

FIG. 5a is a side view of the present invention being inserted between a window molding and the door glass.

FIG. 5b is a side view of the present invention being rotated thereby causing the hook member to be removed from the door frame.

FIG. 5c is a side view of the present invention lifting the removed window molding from the door frame.

FIG. 6a is an upper perspective view of the present invention being inserted between the door glass and the window molding.

FIG. 6b is an upper perspective view of the present invention being lifted for removing the window molding.

FIG. 6c is an upper perspective view of the present invention being slid between the door glass and the window molding.

FIG. 7 is an upper perspective view of an alternative embodiment of the present invention.

FIG. 8 is a side view of the alternative embodiment.

FIG. 9 is an end view of the alternative embodiment.

DETAILED DESCRIPTION OF THE INVENTION

A. Overview of Invention

Turning now descriptively to the drawings, in which similar reference characters denote similar elements throughout the several views, FIGS. 1 through 8 illustrate a molding remover system **10**, which comprises a handle **20** and a shaft member **30** extending from the handle **20**. The shaft member **30** has an engaging portion **36** that extends toward the handle **20**. The engaging portion **36** is formed for engaging a retainer clip **18** attaching a window molding to a door frame.

B. Handle

Figures 1 through 9 illustrate an exemplary handle **20** that may be utilized with the present invention. The handle **20** illustrated in Figures 1 through 6c is comprised of an elongate closed structure similar to that utilized with a screwdriver that the user grasps. The handle **20** illustrated in Figures 7 through 9 is comprised of an open rectangular structure with a center opening for the user to extend their hand through. It can be appreciated that various other structures and designs may be utilized to construct the handle **20**.

C. Shaft Member

A shaft member **30** extends from the handle **20** as shown in Figures 1 through 9 of the drawings. The shaft member **30** includes a distal portion that is angled toward the handle **20** as best illustrated in Figures 2, 3 and 8 of the drawings. The distal portion of the shaft member **30** includes an engaging portion **36** for selectively engaging a retainer clip **18** as shown in Figures 1, 2, 3 and 7 of the drawings.

Figures 1 through 6c illustrate a first embodiment of the present invention wherein the shaft member **30** is comprised of a first segment **31** extending from the

handle **20**, a second segment **32** extending from the first segment **31** at a first angle, and a third segment **34** extending from the second segment **32** at a second angle. The engaging portion **36** extends from the third segment **34** at a third angle as best illustrated in Figures 1 and 2 of the drawings. The first angle and the second angle may be comprised of an angle greater than one hundred degrees. The third angle may be comprised of an angle less than ninety degrees as best illustrated in Figures 1 and 2 of the drawings. The engaging portion **36** may be substantially parallel to the first segment **31** and directed toward the handle **20** as shown in Figures 1 and 2 of the drawings. The engaging portion **36** may be flat and tapered with a broad structure as further shown in Figures 1 and 2 of the drawings.

Figures 7 through 9 of the drawings illustrate a second embodiment of the present invention. The second embodiment has an extended portion **31'** that extends outwardly from the handle **20** as best illustrated in Figure 7 of the drawings. In the alternative embodiment, the third segment **34** is approximately ninety degrees with respect to the second segment **32** as best shown in Figure 7 of the drawings. Also, the engaging portion **36** is approximately ninety degrees with respect to the second segment **32** as best shown in Figure 7 of the drawings. The engaging portion **36** extends towards the handle **20** at an angle with respect to the second segment **32** as shown in Figure 8 of the drawings.

D. Operation of Invention – First Embodiment

In use, the user inserts the engaging portion **36** between the molding belt **14** of the window molding and the door glass **12**. The user continues to insert the shaft member **30** downwardly within the door of the automobile as best illustrated in Figure 6a of the drawings. The user then lifts the engaging portion **36** upwardly to engage a retainer clip **18** attached to the window molding as shown in Figure 5a of the drawings. The user then rotates the handle **20** thereby causing the engaging portion **36** to apply an outward force to the retainer clip **18** thereby forcing the retainer clip **18** from the

upper lip of the door as shown in Figure 5b of the drawings. The user then lifts upwardly upon the engaging portion **36** thereby causing the molding frame **16** to be lifted from the door frame. This process continues until the window molding is completely removed.

E. Operation of Invention – Second Embodiment

In use, the user inserts the engaging portion **36** between the molding belt **14** of the window molding and the door glass **12**. The user continues to insert the shaft member **30** downwardly within the door of the automobile similar to the first embodiment. The user then lifts the engaging portion **36** upwardly to engage a retainer clip **18** attached to the window molding. The user continues to lift upon the engaging portion **36** thereby causing the engaging portion **36** to apply an outward force to the retainer clip **18** thereby forcing the retainer clip **18** from the upper lip of the door. The user continues to lift upwardly upon the engaging portion **36** thereby causing the molding frame **16** to be lifted from the door frame. This process continues until the window molding is completely removed.

As to a further discussion of the manner of usage and operation of the present invention, the same should be apparent from the above description. Accordingly, no further discussion relating to the manner of usage and operation will be provided.

With respect to the above description then, it is to be realized that the optimum dimensional relationships for the parts of the invention, to include variations in size, materials, shape, form, function and manner of operation, assembly and use, are deemed to be within the expertise of those skilled in the art, and all equivalent structural variations and relationships to those illustrated in the drawings and described in the specification are intended to be encompassed by the present invention.

Therefore, the foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.